



Open Access Repository
www.ssoar.info

Setting the habit of capitalization: the pedagogy of earning power at the Harvard Business School, 1920-1940

Muniesa, Fabian

Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:

GESIS - Leibniz-Institut für Sozialwissenschaften

Empfohlene Zitierung / Suggested Citation:

Muniesa, F. (2016). Setting the habit of capitalization: the pedagogy of earning power at the Harvard Business School, 1920-1940. *Historical Social Research*, 41(2), 196-217. <https://doi.org/10.12759/hsr.41.2016.2.196-217>

Nutzungsbedingungen:

Dieser Text wird unter einer CC BY Lizenz (Namensnennung) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:

<https://creativecommons.org/licenses/by/4.0/deed.de>

Terms of use:

This document is made available under a CC BY Licence (Attribution). For more Information see:

<https://creativecommons.org/licenses/by/4.0>

gesis
Leibniz-Institut
für Sozialwissenschaften

Mitglied der

Leibniz-Gemeinschaft

Diese Version ist zitierbar unter / This version is citable under:

<https://nbn-resolving.org/urn:nbn:de:0168-ssoar-46995-3>

Setting the Habit of Capitalization: The Pedagogy of Earning Power at the Harvard Business School, 1920-1940

Fabian Muniesa*

Abstract: »Wie der Habitus der Kapitalisierung etabliert wird: Die Pädagogik an der Harvard Business School, 1920-1940«. The quandaries of business valuation have marked the pedagogy of business administration since early attempts at institutionalizing the managerial discipline. It is however now commonly admitted, at least in legitimate financial and entrepreneurial circles, that the value of a business (that is, the monetary assessment of a functioning enterprise established in a competitive environment) resides primarily in its earning power or, in other words, that what a business is worth equals its capacity to generate a stream of revenues for the investor or investors that provide it with funding. How did this idea take shape and how did it permeate the business mind? An examination of early pedagogical materials at the Harvard Business School (an influential reference for the socialization of the businessperson) and, in particular, of the vagaries of the idea of capitalization and its exercising in the classroom provides a fine occasion to advance understanding of the meaning of such ideals of business and business value, and of their institutionalization. This empirical study can, in turn, be employed in order to discuss and refine critically our interpretation of what a convention of economic valuation is and how it operates.

Keywords: Economic conventions, economics of convention, business valuation, business education, capitalization on earnings, discount rate, case method, Harvard Business School, Arthur Stone Dewing, Cecil Eaton Fraser, John M. Keynes, C. Rufus Rorem.

Introduction

Whatever business we are dealing with, the only criterion is the earning capacity of the business.
Arthur Stone Dewing

The present study¹ approaches the problem of the conventions of business valuation from both an empirical (where do they come from and how do they

* Fabian Muniesa, Centre for the Sociology of Innovation, Mines ParisTech, 60 Boulevard Saint-Michel, 75006 Paris, France; fabian.muniesa@mines-paristech.fr.

spread?) and a theoretical (in what sense do they operate as conventions?) angle. Conventions of business valuation refer here to ordinary practices, standard techniques and intellectual justifications that intervene in the establishment of a quantitative, monetary evaluation of what a “business” (an economic enterprise established in the form of a company) is worth. These conventions obviously carry great significance in the constitution of the economic world, since they orient, or may orient to a great extent, decisions about which business should exist and which should not and therefore, more largely, about how reality ought to look like. The origins and evolutions of such conventions might not obey a purposeful rationale, and their use may be a matter of organizational routine rather than of personal dictate. But they surely possess some form of intentionality, in the sense not of will of conscience but that of a process of orientation (Deleuze 1988).

The convention of valuation that we are considering here is, in a nutshell, the idea according to which the value of something boils down to its “earning power,” that is, it equals the value of a stream of money that an investor shall receive in return for its financing of that something, with today’s value being, in most sophisticated versions of the intuition, a discounted version of tomorrow’s value due to the fact that the latter remains uncertain, and with this prospective earning capacity basically conjectured from retrospective examination, from informed guesswork, or from a combination thereof. The technicalities of financial analysis, asset pricing, capital budgeting and financial accounting, and the numerous notions – discount rate, discounted cash flow, capitalization of earnings, net present value, time value of money, weighted average cost of capital, and so forth – that characterize these practices can be thought of as variations on that intuition. Of course, no seamless story could be told that would show continuity between the many avatars of this understanding, from 19th century forestry economics to 21st century financial analysis (Doganova 2014; Ortiz 2014). And the purpose of this study is not (and could not be) to find order in such variety. My intention, rather, is to examine one salient step in the constitution of business valuation as a professional convention: one salient

¹ This research received the support of the European Research Council (grant no. 263529). I am grateful to Katherine Fox, Rachel Wise and staff members of the Baker Library at the Harvard Business School for the facilitation of access to materials from the Historical Collections. This work is part of a larger project carried out in collaboration with Liliana Doganova. A preliminary version of this work was presented at the *Max-Planck-Institut für Gesellschaftsforschung* in Cologne (29 January 2015), at the 31st Colloquium of the European Group for Organizational Studies in Athens (2–4 July 2015), and at the 40th Annual Conference of the Social Science History Association in Baltimore (12–15 November 2015). I thank Jens Beckert, Ryan Calder, Rainer Diaz-Bone, Emmanuel Didier, Timur Ergen, Marion Fourcade, Jean-Pascal Gond, Daniel Hirschman, Sebastian Kohl, Philipp Korom, Julie Labatut, Andrea Mennicken and Alfred Reckendrees for their comments and remarks, and Liliana Doganova for her thoughtful reading and her pivotal influence in the formation in the views expressed here.

step in which the relevance of earning power was made particularly explicit and subjected to particularly intense pedagogical energy.

The historical sociology of business education has put a great deal of emphasis in the efforts that business schools have devoted, since their inception, to the institutionalization and professionalization of the practice of business (Khurana 2007; Fourcade and Khurana 2013). The Harvard Business School, originally established in 1908 as the Graduate School of Business Administration of Harvard University, is certainly one of the most influential organizations in the establishment of business education standards and orientations. My hypothesis is that a look at early attempts at stabilizing there the insights and recipes of business valuation can be of great value for the task of understanding its conventional features, especially its requirements in terms of realization – i.e. in the terms of how to figure out and make sense of the problem of business value (Muniesa 2014, 96-107; Giraudeau 2008, 61-6). *The Financial Policy of Corporations*, a textbook widely read in the 1920s and 1930s (MacKenzie 2006; Muniesa 2012), stood as one of the most remarkable pedagogical products of the Harvard Business School in that period, together with the courses given by the like of its author, Arthur Stone Dewing, who taught there on economics and finance from 1911 to 1933 and greatly contributed to the case method of instruction, the school's prime pedagogical vehicle (Dewing 1926; Vermeule 1971). *Problems in Finance*, a series of pedagogical cases edited by another notable faculty member, Cecil Eaton Fraser, directed the attention of early case participants to the practical dilemmas of financial valuation (Fraser 1927; Copeland 1958).² This period – basically the interwar period – is interesting for more than one reason. Punctuated by notable debates in economics, especially in regards to the conventional calculation of value, the period is marked by the reception and discussion of remarked contributions by John R. Commons, Irving Fisher, John Maynard Keynes, Frank H. Knight, Joseph Schumpeter and Thorstein Veblen, among others (Yonay 1998). It is also a period in which the science of finance was still not submerged into the quantitative revolution that sprang from the 1950s onwards (MacKenzie 2006). And it is also the period in which newly founded business schools were on the lookout for legitimate form and content (Khurana 2007).

² There exist several editions of *The Financial Policy of Corporations*. The book was first published in 1920, in five volumes, following an earlier issue of the first two volumes. *Problems in Finance*, first printed in 1927 and followed by a second edition in 1930, refers the reader to the single-volume 1926 edition of *The Financial Policy of Corporations*, in particular to a section titled "The Valuation of a Going Business for the Purpose of Promotion" (part II, chapter II). Substantial modifications were introduced in the two-volume 1941 edition of *The Financial Policy of Corporations*, and finally in the latest 1953 edition. We focus hereafter on the 1926 edition (which is most aptly linked to the period and materials we examine) and on the 1953 edition (that features noticeable clarifications and elaborations of thought).

In what follows, I delve into the articulation of business valuation at the Harvard Business School in that period. I focus on the work of Dewing, using published materials and also archival materials from the Baker Library Historical Collections at the Harvard Business School (especially from the Cecil E. Fraser Papers). I first characterize the problem of the conventions of business valuation with a critique of the idea of convention as employed in the economic-theoretical literature (Dupuy 1989). I then introduce the repertoire of business valuation as articulated by Dewing and offer illustrations of classroom situations in which this repertoire ought to be exercised. I look in particular at “Starkey Grocery Company,” a case that appears prominently in the study materials as an illustration of business valuation. I finally conclude on the intellectual opportunities that this case provides for a reconsideration of the problem of capitalist conventions of business valuation.

2. Business Valuation as a Convention

2.1 The Conventional Idea of a Convention of Valuation

To talk about something in terms of a “convention,” in the particular sense ascribed to this term within the scholarly rubric of the “economics of convention” (Diaz-Bone and Salais 2011), often means to consider it as a matter of representation of a subjective (or intersubjective) nature – i.e. a so-called social construction – that may serve well or not, depending on plausibility and commonality, the purpose of “coordination” in situations characterized by “uncertainty.” This viewpoint can translate, as put forward in some contributions that are central to this line of thought (e.g. Orléan 2014), into a particular blend of a subjective theory of value, a theory for which economic value corresponds to one of such conventions. The idea, roughly put, is that from that perspective economic value depends principally on what people think it is, and that what we have when people think the same, despite some claiming the thought might not be objectively right, is a standing and functioning convention of valuation (and, in some cases, a spiraling one).

This intellectual setup is by large depending on the epistemology of economics and controlled by a classic concern for the veracity of prices. True, it subverts a scientific hope for the neat establishment of the truth of economic value and replaces it with a pragmatic acceptance of the rule of opinion. But it is definitely preoccupied with the market’s capacity to tell the truth about value or not, and it clearly sympathizes with a liberal philosophy for which the market is the prime medium for the free expression of claims on worth (Ortiz 2014). The authors I am dealing with in this research and who bore importance in the articulation of economic valuation in the business mind were visibly partial to this conception. The several editions of Dewing’s *The Financial*

Policy of Corporations certainly provide authoritative guidance on how to estimate successfully the value of a business, but the tricks and recipes advocated for were praised by the author only insofar they approached whatever it was that held as a standing convention among professional businesspersons. In a clarification about where his “principles of valuation” stood, added to the latest editions of his book, Dewing would claim:

Value is subjective; it is based on individual human experience. [...] Value changes from hour to hour; value is different according to the standards of experience and the standards of judgement. [...] In the end the test of value is pragmatic – where does the judgement of most men meet? It is the composite of many judgements, not the reaching of an illusory fixed and unvarying basis of value on which the judgement of all people should agree (Dewing 1953, 277).

The problem of value, at least as expressed in the North-American intellectual mind of the interwar period, was certainly controlled by a set of critical fears on the possible fate of a democratic determination of human affairs (Purcell 1973). The fact that the articulation of the idea of a conventional establishment of value owes a lot to that period is of particular interest. Another author of prominent weight in the Anglo-American liberal landscape, the economist Keynes, who is credited for having provided the prime ingredients for a conventionalist understanding of economic valuation, was certainly partial to the potentials of pragmatism and empiricism, as much as he was preoccupied by the mounting menaces to liberal democracy.

In his very clear articulation of the epistemological foundations of the “economics of convention” – the intellectual trend that formed under that banner in French academic milieus in the late 1980s – Jean-Pierre Dupuy points to the pivotal role of the particular blend of game theory developed by the economist Thomas C. Schelling (1960) and by the philosopher David K. Lewis (1969), both deeply worried with the dilemmas of coordination in the face of uncertainty or, in other words, with the troubles of common agreement in front of the potential breakdown of order. But this typical post-World War II interest is complemented, in Dupuy’s account, by an interpretation of Keynes (1936, 1937) suggested by the economist André Orléan (1986). This is interesting because the bits that are actually culled from Keynes in order to ideate what an economic convention (and the economic analysis thereof) is are precisely about business valuation. They come from a section titled “The Inducement to Invest” of *The General Theory of Employment, Interest and Money*, where Keynes discusses the efficiency of capital and the rate of interest.

Bluntly put, the rate of interest represents the price of an investment: for how much would an investor want to invest, which depends on how the investor values the object of investment (i.e. considered in its capacity to generate a return). What does Keynes want to suggest to his readers about that rate? That it is a convention, and that it is an ideal example of what a convention is. But the nuances are interesting, and I believe that there is more to it than just the famous

beauty contest metaphor featured in chapter XII of *The General Theory*. Keynes explicitly states that the convention is not a belief. It is rather a tactic:

In practice we have tacitly agreed, as a rule, to fall back on what is, in truth, a *convention*. The essence of this convention – though it does not, of course, work out quite so simply – lies in assuming that the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change. This does not mean that we really believe that the existing state of affairs will continue indefinitely. We know from extensive experience that this is most unlikely. The actual results of an investment over a long term of years very seldom agree with the initial expectation (Keynes 1936, 152).

What counts for Keynes in the tactical establishment of the “conventional method of calculation” is reliance in the “maintenance of the convention.” Turmoil and confusion are of course not good from that perspective. And, in order to temper the likelihood of unsettlement and to find encouragement for investing, the valuation of investment tends to reduce the timeframe and focus on a series of near futures rather than on a too distant one:

Thus investment becomes reasonably ‘safe’ for the individual investor over short periods, and hence over a succession of short periods however many, if he can fairly rely on there being no breakdown in the convention and on his therefore having an opportunity to revise his judgment and change his investment, before there has been time for much to happen. [...] It has been, I am sure, on the basis of some such procedure as this that our leading investment markets have been developed (Keynes 1936, 153).

And, again against an idea of a subjective mechanism or behavioral determination, Keynes further refines his idea of a convention:

It might be more accurate, perhaps, to say that the rate of interest is a highly conventional, rather than a highly psychological, phenomenon. For its actual value is largely governed by the prevailing view as to what its value is expected to be. *Any* level of interest which is accepted with sufficient conviction as *likely* to be durable *will* be durable; subject, of course, in a changing society to fluctuations for all kinds of reasons round the expected normal (Keynes 1936, 203).

Keynes seems to provide quite a reflexive image of the convention. It does not sound as some sort of a game in which an investor is trying to anticipate what others think or would think, contrary to what the above-mentioned shibboleth of the beauty contest would imply.³ It rather sounds as some sort of a habit with which the investor tries to “encourage himself,” “fairly” relying on the fact that there should be “no breakdown in the convention” over a succession of “short periods.” Furthermore, the idea of an economic convention seems to be more

³ But compare to the interpretation favored by Orléan (1986) and Dupuy (1989), who concentrate on a later claim by Keynes on “the psychology of a society of individuals each of whom is endeavoring to copy the others” (Keynes 1937, 214) and precipitates an understanding of the convention in terms of mimetic behavior and cognitive contagion.

about a habit in the method of valuation that about an agreement on the actual figure that springs from it.

A comparable intuition seems to be at work in the considerations that someone like Dewing would offer on the conventional nature of the rate that is used for the valuation of a business, measured by its earning power: “capitalization on net earnings,” in his preferred vocabulary.⁴ There is surely an element of confidence in the continuity of income over a reasonable period of time:

Under our competitive system of economic values, the business is the instrument which created the earnings, and the valuation of the business is the valuation of this instrument. It is true, too, under our competitive system that the price which men will pay for this instrument will depend on the relative certainty with which these earnings can be counted upon to continue. In other words, the rate at which a business shall be capitalized, to obtain its value, will depend on the confidence the buyer may feel in the continuation of the earnings. This is the relative risk of the business itself. The greater the risk, the greater the doubt of continued earnings, the lower is the capitalized value of these earnings; and conversely, the lower the risk, the greater the value (Dewing 1953, 288).

But there is also a conventional understanding of the method of valuation (“guesswork”), and on the tactics of its empirical verification:

Perhaps the most difficult, and so far as results are concerned, the most important point in any theory of value based on earning power, is the rate at which earnings shall be capitalized. [...] Yet the determination of this rate is at best a matter of guesswork, but guesswork supported by the evidence of prices at which businesses of various kinds are being actually valued at any one time. This evidence from current experience with reference to the value of different enterprises can be culled out not only from the prices at which enterprises are actually sold, but also from the valuation put upon them by bankers extending credit to them and by investors who are willing to buy their bonds and stocks. In other words, such guesswork is subject to the best kind of pragmatic test, namely the evidence of actual experience (Dewing 1953, 292; see also Dewing 1926, 273).

2.2 The Business of Accounting for Business Value

For authors such as Fraser and Dewing (and they certainly were not alone in this) the determination of business value was a practical problem: a question called for by the mundane conduct of business rather than by theoretical disquisitions. Although some all-encompassing universal considerations were clearly at work (e.g. the grand claim that everything boils down to earning power), the issues at hand were rather about how value should or would fit into a balance sheet and to what end. Accounting was put in the forefront, rather than eco-

⁴ As Fisher (1906, 194) indicates, the rate of capitalization can be understood as a conversion of the rate of interest, i.e. the price of income in terms of capital, instead of the price of capital in terms of income (his definition of the rate of interest).

conomic theory.⁵ That is certainly what one can gather from a glance at *Problems in Finance* (Fraser 1927), one of the earliest Harvard case books. The book presents a collection of practical cases cluttered with tables: balance sheets of all sorts in particular (more on this below). For example, the “exhibits” displayed in “Starkey Grocery Company,” the case that opens the section on valuation, consist of 4 tables: the balance sheets and estimates of earnings for two companies, displayed in different guises, so as to render realistically the idiosyncrasies of mundane accounting practices. The intellectual scholarly guidance required, if at all, for the preparation of such kinds of pedagogical cases was to be found in the pages of *The Accounting Review* or *The Journal of Business* rather than, say, in *The American Economic Review*, *The Quarterly Journal of Economics* or *The Journal of Political Economy*. The folder that contains materials gathered by Fraser for the preparation of “Starkey Grocery Company” includes, for example, offprints of a couple of papers by C. Rufus Rorem published in 1929 in the two aforementioned journals (Rorem 1929a, 1929b).⁶

Rorem, a reputable contributor to financial accounting theory who has been particularly praised for his contribution to medical accounting (Hendrickson 1991), was arguably useful here, in part, because of his discussion on “the time element in business valuation” (Rorem 1929a, 312), that is, on the problem of the timing of revenue – a problem which is central, as indicated above, to the maintenance of a convention of business valuation which consists essentially of “the prediction and measurement of realized income” (Rorem 1929a, 312). Rorem associates the idea of “business value” to that of “going concern value” – i.e. “the total expected income from the property of an enterprise which conducts its affairs with a view to making income exceed cost by the greatest possible amount” (Rorem 1929a, 313) – as elaborated by Commons in his *Legal Foundations of Capitalism* (Commons 1924, 182-213).⁷

Rorem would give a definition of what an asset is that could strike the reader as quite in phase with the intellectual efforts developed by Fisher (1906, 1907), although with no reference to them:

Assets are conceptual entities having no existence apart from the income expected to be realized from them in the future. [...] The assets are mere esti-

⁵ I sympathize with the critical observation put forward by Ève Chiapello and Alain Desrosières when they suggest that economists tend to develop a rather meagre interest in business accounting, and that this is particularly the case for economists “of convention” (Chiapello and Desrosières 2006, 299).

⁶ Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924-1947. Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

⁷ Expressions such as “going business,” “going business concern,” “going concern” or “going enterprise,” which seemed to heavily populate business valuation parlance in the interwar period and which certainly find in Commons (1924) an intellectual hub, conveyed quite well the idea of the value of business stemming from the continuing capability of return, that is, from earning power (Dewing 1926, 264; Badger 1925).

mates of the portions of future income which can be imputed to certain physical, commodities, contractual obligations, and 'intangible' sources of exchange value. Accountants are prone to start with the assets as a given quantity and to speak of income as derived from the assets. On the contrary, it is the income which is the essence of capital value; the assets are mere 'conceptual' objects. Creditors and proprietors in reality are not the owners of assets but merely the prospective, recipients of future income. The validity of the asset values appearing in the balance sheet depends entirely upon future income transactions (Rorem 1929a, 316).

The balance sheet, Rorem would then claim, "is merely a present representation of income to be realized in the future" (Rorem 1929a, 317), which carries the quite liberal implication that the correct valuation of the assets "depends upon the intended use" (Rorem 1929a, 318).⁸ The idea that valuation depends on the purpose that the asset is provided with is central to the convention of capitalization that we are scrutinizing here. A salient trait of capitalization follows, of course: that the use of the asset will in turn depend entirely (or almost) on valuation. A businessperson may use an asset in very different manners, depending in particular on the probable income that this asset (i.e. this use of the asset) may yield – or, in other words, depending on the specific path pursued in order "to make income exceed cost." Rorem links this idea to the economist's concept of "opportunity cost" (Rorem 1929a, 319).

Rorem also focuses on what we may call the crux of the convention, namely the conventional determination of temporal thresholds in the perception of income:

The value of a business asset arises from the income expected to be derived from it; but the recognition of this fact is much easier than the application of it. A calculation of business value involves a prediction both of the exact quantities of monetary net income which will be realized and of the exact periods in the future during which they will be received (Rorem 1929a, 320).

Practical problems that would characterize the establishment of this convention would be, for example, price movements and variations in the value of the currency, changing estimation of the rate of output, unanticipated business prosperity or decay, but also trends in the regulation of the social order, and, last but certainly not least, shifts in business wishes – or "changes in administrative intent as to use of an enterprise or its assets" (Rorem 1929a, 320). And all or almost all of these problems will revolve around the problem of establishing values in a balance sheet.

⁸ On the policy of the balance sheet, Rorem refers the reader to Eugen Schmalenbach, Herman Veit Simon, and their particular blend of financial accounting (especially to their theorization of the asset).

3. Starkey Grocery Company

3.1 Introducing Valuation with a Practical Case

Let us now move into the setting where the practical concern for the pedagogical exercising of the habit of business valuation – the habit of capitalization – ought to be worked out: the classroom. Let us look at “Starkey Grocery Company,” a case featured in section IX (titled “Valuation, Combination and Reorganization” in the first edition) of Fraser’s *Problems in Finance* (Fraser 1927, 621-7).⁹ The purpose of this case was to introduce and illustrate the topic of business valuation to any prospective reader (the case book was available from a commercial publisher) but also, in particular, to students enrolled in the 1920s and 1930s in the programs offered at the Graduate School of Business Administration of Harvard University (later to be known as Harvard Business School). The case was taught there by Fraser, Dewing and a number of other faculty members.¹⁰

In that period, cases developed in the context of the so-called “case method” that gradually became the distinctive educative vehicle of the Harvard Business School were often still called “problems” instead of “cases” (Copeland 1958, 254-62). Fraser, Dewing and their colleagues were very much focused on the business of refining, legitimizing, perfecting, implementing and publicizing this method which basically consisted of bringing some form of a realistic business situation inside the classroom, and having students learn through the actual experience of participating in it – a simulacrum of business (see Muniesa 2014, 96-107). Fraser, for example, was the editor of a volume titled *The Case Method of Instruction* that gathered contributions from a number of faculty members on topics such as how to document, write and teach a case, and why (Fraser 1931a). The volume opened with Dewing’s “Introduction to the Use of Cases,” which had already been printed in *Problems in Finance*.

⁹ The section of *Problems of Finance* which opens with “Starkey Grocery Company” refers the reader straightaway to background literature on valuation, starting with Dewing (1926, 258-77), followed by Gerstenberg (1915, 499-541; 1924, 37-8, 543-63, 606), with Badger (1925) added also to the 1930 new edition of the book (Fraser 1930, 515).

¹⁰ The primary source materials on which this section is based consist of both the 1927 and 1930 editions of Fraser’s *Problems in Finance*; case teaching notes offered in the 1931 revised edition of Fraser’s *Key to Problems in Finance*; the 1920, 1926, 1941 and 1953 editions of Dewing’s *The Financial Policy of Corporations*; the 1922 edition of Dewing’s *Problems to Accompany The Financial Policy of Corporations*; and documentation for the Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School, in particular from the Fraser’s teaching records (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924-1947). A folder related to “Starkey Grocery Company” (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company), contains handwritten or typewritten notes taken on specific teaching sessions, copies of the case in several versions, and a number of offprints and brochures.

How did a case such as “Starkey Grocery Company” work? Some faculty member would manage to get in touch, usually through personal acquaintances, with an executive in a company facing or having faced a situation of interest for the course. Ties to the industry were more than ties: it was not unusual for professors in the business school to mingle or have mingled with actual business in their professional life. Dewing and Fraser would be considered as reliable introductions to sources, together with Georges F. Doriot, another prominent faculty member (see Dewing 1922; Fraser and Doriot 1932).¹¹ Access to main data (i.e. balance sheets, brochures, a few statements about the problems at hand), though not extremely hard to achieve, was skillfully conducted. The crux resided rather in the writing of the case and the articulation of “specifications.” That task was put into the hands of a “case writer,” that is, a staff member of the school’s Bureau of Business Research, the office in charge of developing intelligence and materials for the case method (McNair 1931, 1954; Copeland 1958). A case was usually tested both in discussions with colleagues and in the classroom, then refined and adapted. The name of the original company was concealed most of the time – we do not know which company stood as the source for “Starkey Grocery Company.” Figures could also be adapted, and formulation of issues tinkered with for the sake of pedagogy. For example, a whole section on warehousing in “Starkey Grocery Company” was “rung in” in spite of the fact that “the source never considered to be part of his problem,” with the purpose of making it fit for an introduction to the topic of business policy.¹² The case would need to be halfway between real and realistic. What ought to be put upfront was definitely one “issue” (McNair 1931), rather than a tedious concatenation of factual exactitudes.

The “Starkey Grocery Company” case (subtitled “Purchase of a Business”) starts like this:

In the fall of 1923, the president of the Elm Grocery Company asked the treasurer of the Starkey Grocery Company whether the latter company would be interested in purchasing the controlling stock of the former company. The

¹¹ Archival material suggests that Dewing stood as a prominent resource for the sorting out of case sources, e.g. mentions like “See Mr. Dewing for letter of introduction” in correspondence about case specifications. Doriot seems to have been mentioned as a correspondent for “Starkey Grocery Company.” Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 8, f. 17 PF-1930, S1 – Specifications – Finance – 2; Box 8, f. 20 PF-1930, S1 – Specifications – Finance – 5).

¹² This is suggested in a memorandum, dated 5 January 1926 and addressed by George Russell Cogswell to Melvin T. Copeland, discussing the opportunity and benefits of using “Starkey Grocery Company” as an “introductory problem.” The adaptation is justified as a means to emphasize aspects that would increase the introductory capacity of the case. Cecil E. Fraser Papers, 1919–1947, Baker Library Historical Collections, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

president of the Elm Grocery Company wished to retire on account of ill health and the loss by death of the services of several of his most valuable assistants. He thought that the long-established reputation and the desirable private brands of his company would make it valuable to its principal competitor, the Starkey Grocery Company (Fraser 1927, 621).

Then the case advances some figures, indicates some details – both quantitative and qualitative – about the two companies: characteristics, sales, balance sheets (presented in different fashion for each company). Emphasis is put on the identification of assets, earnings and taxes, and on the principles used for the valuation of Elm Grocery Company. The president of Elm Grocery Company controlled more than half of the common stock, and the initial offer was to sell these shares at \$125 a share. The accounting firm employed by Starkey Grocery Company to investigate Elm Grocery Company gave a report which concluded that “preferred and common stock of the Elm Grocery Company had a total value not exceeding \$500,000” (Fraser 1927, 625). The officers of Starkey Grocery Company found that “essentially accurate” but, “on account of friendly relationships,” were ready to offer \$525,000, which would translate into \$62.50 per share of common stock. The case then provides details on a shareholder meeting in which one third of the common stockholders of Elm Grocery Company voted to refuse the contemplated offer and made application for “the appointment of unbiased appraisers for a revaluation of the common stock,” contending that “the goodwill of the Elm Grocery Company had not been considered in the proposed purchase price” (Fraser 1927, 625). And so it happened, the case tells. The case then provides elements that emerged in the course of this new investigation. New evidence of earnings previous to the apparently problematic period used in the previous report (1917 to 1923, which comprised indeed a period of governmental price fixing policy) was provided. Importantly, it was shown that the retail stores “purchased their merchandise from the wholesale department at the actual cost to the wholesale department, plus a charge of 3%,” thus hampering the display of “true profits” (Fraser 1927, 626). Further elements are given, for example on the evolution of the line of credit provided to Elm Grocery Company by banks, on problems with a lease with a building, on an estimate from an architect to equip that building for satisfactory use, and on the general situation of increased competition of retail chain grocery stores. The case concludes with the following questions: “What was a fair valuation of the Elm Grocery Company? What offer should have been made per share for the common stock?” (Fraser 1927, 627).

The case’s teaching note (a teaching guide that instructors would use in order to facilitate the pedagogical process in the classroom) opens with a short introductory paragraph that situates the importance of the subject of valuation, especially when a business is to be liquidated, sold or merged, adding one caveat on the case-by-case nature of the problem, and another one on the influ-

ence of bargaining in the determination of value (Fraser 1931b, 106).¹³ Then it indicates that there exist several methods that could be considered in the classroom discussion of the case for the establishment of the value of Elm Grocery Company: a distinction is established between the “book value of the assets” on the one hand, and “capitalized past earnings” and “future earnings” on the other (Fraser 1931b, 106). The note observes that, for determining book value, a distinction should be made between consumer goods in the inventory (liquid) and producer goods (fixtures and fixed assets, less marketable, goods which “will usually bring only a fraction of their cost” in case of forced liquidation), adding that, in evaluating the latter, “one has to look to earnings, either past or prospective” (Fraser 1931b, 106). It then briefly considers the evaluation of goodwill (“probably one of the most difficult problems of valuation”) and suggests a conception that defines goodwill as “the difference between book value of assets and capitalized earnings” (Fraser 1931b, 106). Then it concludes with the following tip:

One valuation might be computed as follows. The total value of current assets is approximately \$1,000,000. If 10% is deducted for possible depreciation, \$900,000 remains. If the current liabilities are deducted, about \$300,000 might be considered the value of the net quick assets of the business. Over a period of 15 years the company has averaged \$57,681 profit. For the past few years a profit of \$30,000 appears a better earnings figure for capitalization. At 10% this would amount to \$300,000. The sum of these figures, \$600,000, might be offered for the business (Fraser 1931b, 106).

The value of a business (e.g. the price that ought to be paid to its owners in order to acquire it) is not based on what the business has in possession, but on the capacity of whatever it has to ensure continuing revenue in the future. This requires a series of interpretive operations. One is to classify what the business has in possession and see what counts as sources of earnings (for example resources that are needed for production, and also particular abilities) and what not (possessions that might at best be sold for profit on spot). Another is to identify past earnings and assess their nature. The “rate of capitalization” (which can amount to a price-earnings ratio for traded company stock) is the convention that links actual average earnings to the envisaged valuation of the company. In this rate resides the core of business valuation here, e.g. in particular the confidence of the continuation of return on investment or, in other words, the perception of earning power.

¹³ The text of the teaching note for “Starkey Grocery Company” in the 1931 second, revised edition of *Key to Problems in Finance* is identical to the one marked “as sent to publisher” found in the archives. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF–1927, Ch. IX–1: Starkey Grocery Company).

3.2 The Craft of Realization

But realizing what business valuation would be about does not come from reading the case. The case method is explicitly about “doing” it, and the ultimate ingredient of the pedagogical experience is the exercising of the case in the classroom. How did it go with “Starkey Grocery Company”? The teaching records available from the Baker Library Historical Collections provide some materials that can help get the flavor of how a teaching session on that case with Fraser or Dewing would look like.¹⁴

Fraser’s teaching style was rather sober and pragmatic, compliant with the case’s pedagogical pace and with remarks kept to the point. His approach to “Starkey Grocery Company” would tend to focus, for example, on the convention of the timespan required for the valuation reasoning. How is earning power guessed from available information? Past earnings can definitely enter the equation, but the question then is how, e.g. what period should be covered, how does this period constitute a trend or not, and what precautions should be taken when drawing conclusions about prospective earnings. Notes from a teaching session would include mentions such as the following:

How many years determine earning power? Is from 1927 back to 1921 enough? Number of years must be enough to include both prosperity and depression. If you can get both in five years, all right, but if not then take more years. Less than five years ordinarily not satisfactory, for usually you have to take more to get the extremes.¹⁵

The pragmatic set of mind is quite apparent too in responses to questions from students. Fraser would for example refer to the juristic situation in an explanation on how to gather a fair assessment for the establishment of valuation:

Student question: How do you find what the average rate for the business is?
Get some reliable man and give him figures which back up your idea and have him testify in court. If you have no figures, you must have many witnesses (ibid.).

Notes on the “Starkey Grocery Company” teaching session are full of emphasis on calculative tinkering, i.e. on the adjustment of estimations based on purpose and circumstance. But there is always a call for demonstration: the businessperson ought to be able to prove the soundness of reasoning, and this is done with direct reference to the fact that “business guess” can be subjected to public

¹⁴ The folder devoted to “Starkey Grocery Company” contains typewritten notes that consist of the transcription of teaching sessions, probably taken by staff members of the Bureau of Business Research. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

¹⁵ “Professor Fraser,” notes on teaching session, dated 18 April 1928. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

scrutiny and legal judgment. Business valuation was certainly a important issue in the midst of the transformations that were characterizing North-American jurisprudence in that period, prompted in particular by the movement that came to be known as legal realism and connected to early instalments of the current of “law and economics” (Purcell 1973). Important cases in public utility valuation, such as *McCardle v. Indianapolis Water Company* (a case argued before the Supreme Court of the United States in 1926 which dealt with the determination of the present value of the property of a public utility) were pivotal in debates about whether or not the law should be established on the grounds of an economic analysis of value, or the other way around (see Field 1998, 318; Mennel and Compston 1996, 209; Bauer and Gold 1934, 98-103; Richberg 1927, 1933). *McCardle v. Indianapolis Water Company* seemed to have been part of the pedagogical concerns addressed by Fraser.¹⁶

The gaze of “earning power,” impersonated in the case’s narrative by the minority shareholders of Elm Grocery Company and the owners of Starkey Grocery Company, was a recurrent token in the classroom: students should espouse this viewpoint, but in a manner that was deemed consistent with common opinion. To value meant to utter a figure, but the figure ought then to be accepted by others. To value meant, in a sense, to testify:

Capitalizing assets at 10% gives \$300,000. Then where do you get \$600,000? If you are on the stand you will have to show how you arrived at the figures or your whole testimony will be thrown out. Have to get closest business guess.¹⁷

The notes on the teaching sessions record expressions that render a taste for the conditional, the incidental and the plausible: “probably,” “one method,” “play on the safe side,” “around,” and so forth. Even the agreed figure, \$600,000, is presented as an approximation that is justified by the fact that it can be read through a number of possible angles:

Now the assured check is against earnings. Value consumer’s goods at market – \$900,000. Subtract totals current liabilities at full amount. Leaves \$300,000 as value of current assets. Value of equipment is dependent on earnings. Producer’s goods are worth only what they will earn. Goodwill or going value is connected with earnings. No earnings unless you actually use the business. Goodwill does not exist in a strict sense but going value does exist. Determine value by earnings, approximately \$30,000. Have enough years for both prosperity and depression. At 10% \$300,000. Total about \$600,000 for the business. Probably as near correct as you can get (ibid.).

¹⁶ The folder devoted to “Starkey Grocery Company” contains an offprint of the “*McCardle v. Indianapolis Water Company*” court case. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

¹⁷ “Professor Fraser,” notes on teaching session, dated 18 April 1928. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924–1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

Dewing's style of teaching provides a contrast compared to Fraser's. The tone is perhaps more ideological, and there are palpable drifts that take the classroom away from the nuts and bolts of the case, into other examples and considerations. Dewing would for example spend considerable time communicating pedagogically the idea of value as earning power, value as "going business" – here, for example, picking up a famous quote from Boswell (1811, vol. 4, 337):

Samuel Johnson is executor of friend's estate – a brewery – 'I am here, not to sell vats and pans, but the opportunity of growing rich beyond the dreams of avarice.' The Doctor's way of saying a 'going business.' Not goodwill in the technical sense, but the 'goingness' of the business.'¹⁸

This introduction was immediately followed by an example and further clarification:

Two adjacent mills in Fall River. One with new automatic looms, up-to-date, well equipped, recently sold for \$1.50 a spindle for taxes. The other has old obsolete, hand looms, has the second highest spindleage value of any New England mills. A mess of junk, from the technical standpoint, but operated by two men, one a genius in production-making old equipment produce at low cost, the other a genius in selling. Therefore the real value of A and B lies in the combination of the two. Fixed assets have value only when going, and entrepreneur ability must have something to work on, or is like energy operating in a vacuum. The only basis on which fixed assets and entrepreneur ability can be measured is in terms of economic productivity, or earnings. So we should speak of the value of producers' goods only in terms of capitalization of earnings. The determination of earning capacity is therefore the first step. This leaves several unknown in the equation (ibid.).

The translation from earnings to capitalization is, as Dewing makes clear in the classroom, controlled by habit:

Now, what ratio shall be used to proceed from earning to capitalization? Determined by experience, a surprising uniformity exists. The rates are stratified among different business, depending upon the importance of goodwill (ibid.).

The fact that five years appear as a decent timespan in the case under consideration is explained along that line of understanding:

The key is the determination of net earnings and the rate of capitalization, and the number of years average. Generally 5 years in industrials. Consider strategic importance of Elm Company to Starkey Company. These intangible factors have to be considered. They were, in a sense, competitors. Buying out competition. Now a tendency to use longer period as business men are aware of the industrial cycle, and want to see top and bottom included (ibid.).

¹⁸ "Professor Dewing," notes on teaching session, undated. Cecil E. Fraser Papers, HBS Archives, Baker Library, Harvard Business School (Series II. HBS Teaching Records: MBA and Doctoral Programs, 1924-1947 (Box 4, f. 8 PF-1927, Ch. IX-1: Starkey Grocery Company).

3.3 The Habit of Capitalization

The language used by Dewing in the classroom is comparable to the one used in *The Financial Policy of Corporations*, especially in early editions (Dewing 1926, 258-77). The pedagogical elaboration of value as earning power would rely, for instance, on the explication of differences in the nature of assets. The reasoning would usually start with a distinction between “consumer goods” and “producer goods.” The value of commodities in the business inventory can be established directly, so to say. But, in contrast, the business has things (assets) whose usefulness depends on the capacity to produce commodities, not on their value as commodities. There is a crux in this distinction, which is that the value of goods of the second type (which of course are massive if one considers what a business consists of) is not based on exchange value, but rather on some capacity – or power – that the thing confers: earning capacity. These are called “fixed assets” (as opposed to “quick assets”), but their earning capacity does not come alone, “they require the intangible something that we call management” (Dewing 1926, 262):

The valuation of the fixed assets and the management of the business are inseparably bound together. The fixed assets of a business can earn nothing – have no value as producers’ goods – without management; and skill of management has no value, it is a meaningless symbol, without fixed assets to manage. The problem narrows itself to a method by which the two, fixed assets and skill of management, can be evaluated together. The solution of this enigma is earning power (Dewing 1926, 263).

At the end of a long footnote, Dewing (1926, 264) indicates that this theory of value being based in earning power is more fully developed by Ralph Eastman Badger in *The Valuation of Industrial Securities* (Badger 1925), a source he visibly used for the discussion of the ratios for the capitalization of net earnings. Capitalization of net earnings, which bases the prospect of future earning power on an examination of the records of past earnings, is indeed the methodology favored by Dewing:

What will shrewd business men require as ratio between the earnings and the cost of the business before they will risk their capital in it? This is a question of experience. [...] Or, stating the same idea differently, the greater the risk of the business, the smaller the ratio between past earnings and present value; and, conversely, the greater the stability of the business – and the less degree to which management is a prerequisite to success – the greater the ratio between past earnings and present value. The relative importance of management gives us a key to the relative value of a business in terms of the record of past earnings (Dewing 1926, 265-6).

And the rate certainly depends on the whims of investors and the tastes of bankers, a rather “fickle” ground (Dewing 1926, 267). But there is a “surprising” concurrence, a sort of an emergent, shared habit: “Some kind of guess is necessary. Promoters are forming estimates of value all the time. The surpris-

ing thing is that, so frequently, the independent estimates of value made by different promoters are very close” (Dewing 1926, 268).

Dewing gives an actual example of this, providing abundant details. The case is about the valuation of a natural gas property operating in Pennsylvania in 1925, and a description of five different appraisals is offered, all different in nature and purpose: some adopt an engineering point of view and others are closer to the gaze of a banker. The five ended up considering a similar ratio:

All the estimates of value for the purpose of purchase were based primarily on actual and potential earning power and no one was at all concerned with original cost, plant account on the balance sheet, or reproduction value. Four out of the five employed a ratio of five to one between value and net earnings, that is, they capitalized the net earnings on a 20 per cent basis. Finally, all five of the estimates were so close together, even after the variety of adjustments, that the highest was less than 10 per cent greater than the lowest. Such closeness is indeed remarkable, even for estimates based on capitalized earnings, and shows the unanimity of judgment concerning value of practical business men forced to decide in a relatively short period of time the actual value of a rather complex business structure to be purchased for the purpose of promotion (Dewing 1926, 273).

A convention of valuation thus emerges in the eyes of Dewing, certainly in the form of a convergence of views on the value that is attributed to a particular business, but as a consequence of a coincidence on the valuation principle: namely, earning power. And the convention does not emerge out of the anticipation of what others would propose in terms of valuation, but out of experience, that is, of the habit of observing and experiencing what people in business come up with usually in terms of valuation. And this experience, we shall add, includes of course the experience in the classroom.

4. Conclusion

The problem of coming up with one conventional way of quantifying things, Alain Desrosières once observed, is commanded by the problem of establishing, in quite a performative fashion, what he called “the realism of the aggregate” (Desrosières 1998). In his sparse remarks on the specific case of the balance sheet (e.g. Desrosières 2001), he suggested caution with the sort of realism that an enquirer ought to find there: the problems of realism displayed in business accounting would differ radically from the ones encountered in, say, scientific metrology and probabilistic calculation (e.g. Daston 1994). In the balance sheet, the object submitted to quantification (that is, money), although possibly quite demanding in terms of verification, is also undeniably quite flexible (Mennicken and Power 2015). Desrosières (2001, 342-3) signaled, referring to notable attempts at establishing a science of economic observations, such as in Oskar Morgenstern’s *On the Accuracy of Economic Observa-*

tions (1950; see also Maas and Morgan 2012), how categories such as “error” or “lie” could lose relevance in the face of the evidence of leeway. The value of money wears in fact the characteristics of a bet on what might happen in the future, and this is heavily dependent on common judgment. Of course, errors are possible. But, purposeful concealment or blatant negligence put aside, these are rather about guesswork gone wrong (e.g. judgement being too “optimistic” or “pessimistic”).

The materials examined in this study show a number of things in relation to this problem. The pedagogues that were in charge of forming the business mind in North-American elite educational institutions in the interwar period (at least the ones I focused on at the Harvard Business School) were positively less preoccupied with the problem of telling what is objective (or subjective) from what is not than with the task of realizing what common business judgment boils down to. They were also busy with the project of transmitting this realization, in a somewhat adventurous fashion, to the prospective businessperson, and with the task of coping with the balance sheet. The formation of a convention of business valuation was not, in their view, about the establishment and conservation of an arbitrary belief. It was rather about the cultivation of a tactical habit. That habit was quite counterintuitive, at least to some extent. It had to be realized. The idea of value as “earning power” deserves in this respect special attention. The efforts displayed in the pedagogical vehicles that I have examined here were exactly this: efforts, that is, attempts at extracting a challenging idea, at breaking down flawed stereotypes that would hamper the businessperson’s recognition of the nature of the medium of business. This process of realization, we observe, required an entire philosophy: a philosophy perhaps not in the sense of a scholastic tradition, but rather in the sense of an attitude or disposition. What I have termed “the habit of capitalization” encapsulates that philosophy. This habit resides in the exercising of the capacity to recognize in the objects of valuation (whatever these may be) the qualities of an “asset,” that is, its potentials to produce earnings or, in other words (Dewey’s), the “goingness” of business.

The notion of habit – a staple term of social-scientific vocabulary which obviously suffers from lasting polysemy (Camic 1986) – can certainly take us in the wrong direction, for instance with an overemphasis on unconscious behavioral mechanisms. What this study suggests is that habit ought to be understood as something that needs to be purposefully exercised (Sloterdijk 2013). The key term here is realization. What the businessperson ought to do is to acquire the ability to recognize business value at first sight. The link that there exists between the establishment of the capitalistic convention of business valuation and its realization in the classroom is openly paradoxical. On the one hand, as I have suggested, the right path to business valuation is presented as something counterintuitive, i.e. as somethings that breaks the rules of common understanding. Like Fisher (1907), the authors that I have followed in this study

struggle to counter the otherwise widespread idea according to which, in business, the value of something amounts to the price you can get from it when you sell it on the market. But, on the other hand, the business pedagogues tended to present the convention of valuation as an explication of something that is readily observable, in an implicit manner, in business conduct, not as a discovery that should be used in order to improve an otherwise flawed reality. Realizing the habit of business valuation involved simultaneously the two sides of the verb “to realize,” e.g. to make sense of something that is already there and to make that thing altogether.

References

- Badger, Ralph Eastman. 1925. *Valuation of industrial securities*. New York: Prentice-Hall.
- Bauer John, and Nathaniel Gold. 1934. *Public utility valuation for purposes of rate control*. New York: Macmillan.
- Boswell, James. 1811. *The life of Samuel Johnson, LL. D.* London: Cadell and Davies.
- Camic, Charles. 1986. The matter of habit. *American Journal of Sociology* 91 (5): 1039-87.
- Chiapello, Ève, and Alain Desrosières. 2006. La quantification de l'économie et la recherche en sciences sociales: Paradoxes, contradictions et omissions – Le cas exemplaire de la positive accounting theory. In *L'économie des conventions: Méthodes et résultats*, vol. 1, ed. François Eymard-Duvernay, 297-310. Paris: La Découverte.
- Commons, John R. 1924. *Legal foundations of capitalism*. New York: Macmillan.
- Copeland, Melvin T. 1958. *And mark and era: The story of the Harvard Business School*. Boston: Little, Brown and Co.
- Daston, Lorraine. 1994. How probabilities came to be objective and subjective. *Historia Mathematica* 21 (3): 330-44.
- Deleuze, Gilles. 1988. *Foucault*. Minneapolis: University of Minnesota Press.
- Desrosières, Alain. 1998. *The politics of large numbers. A history of statistical reasoning*. Cambridge: Harvard University Press.
- Desrosières, Alain. 2001. How real are statistics? Four possible attitudes. *Social Research* 68 (2): 339-55.
- Dewing, Arthur Stone. 1922. *Problems to accompany the financial policy of corporations*. New York: Ronald Press Co.
- Dewing, Arthur Stone. 1926. *The financial policy of corporations*, 2nd ed. New York: Ronald Press Co.
- Dewing, Arthur Stone. 1953. *The financial policy of corporations*, vol. 1., 5th ed. New York: Ronald Press Co.
- Diaz-Bone, Rainer, and Robert Salais. 2011. Economics of convention and the history of economies: Towards a transdisciplinary approach in economic history. *Historical Social Research* 36 (4): 7-39 <<http://www.ssoar.info/ssoar/handle/document/36326>>.

- Doganova, Liliana. 2014. Décompter le futur: La formule des flux actualisés et le manager-investisseur. *Sociétés Contemporaines* 93: 67-87.
- Dupuy, Jean-Pierre. 1989. Convention et common knowledge. *Revue Économique* 40 (2): 361-400.
- Field, Barbara H. 1998. *The progressive assault on laissez faire: Robert Hale and the first law and economics movement*. Cambridge: Harvard University Press.
- Fisher, Irving. 1906. *The nature of capital and income*. New York: Macmillan.
- Fisher, Irving. 1907. *The rate of interest: Its nature, determination and relation to economic phenomena*. New York: Macmillan.
- Fourcade, Marion, and Rakesh Khurana. 2013. From social control to financial economics: The linked ecologies of economics and business in twentieth century America. *Theory and Society* 42 (2): 121-59.
- Fraser, Cecil Eaton. 1927. *Problems in finance*. New York: McGraw-Hill.
- Fraser, Cecil Eaton. 1930. *Problems in finance*, 2nd ed. New York: McGraw-Hill.
- Fraser, Cecil Eaton, ed. 1931a. *The case method of instruction: A related series of articles*. New York: McGraw-Hill.
- Fraser, Cecil Eaton. 1931b. *Key to problems in finance*, 2nd ed. New York: McGraw-Hill.
- Fraser, Cecil Eaton, and Georges F. Doriot. 1932. *Analyzing our industries*. New York: McGraw-Hill.
- Gerstenberg, Charles W. 1915. *Materials of corporation finance*. New York: Prentice-Hall.
- Gerstenberg, Charles W. 1924. *Financial organization and management*. New York: Prentice-Hall.
- Giraudeau, Martin. 2008. Remembering the future: Entrepreneurship guidebooks in the US, from meditation to method (1945-75). *Foucault Studies* 13: 40-66.
- Hendrickson, Harvey S., ed. 1991. *Relevant accounting concepts and applications: The writings and contributions of C. Rufus Rorem*. New York: Garland Publishing.
- Keynes, John M. 1936. *The general theory of employment, interest and money*. London: Macmillan.
- Keynes, John M. 1937. The general theory of employment. *Quarterly Journal of Economics* 51 (2): 209-23.
- Khurana, Rakesh. 2007. *From higher aims to hired hands: The social transformation of American business schools and the unfulfilled promise of management as a profession*. Princeton: Princeton University Press.
- Lewis, David K. 1969. *Convention: A philosophical study*. Cambridge: Harvard University Press.
- Maas, Harro, and Mary S. Morgan, eds. 2012. *Observing the economy: Historical perspectives*. Durham: Duke University Press.
- MacKenzie, Donald. 2006. *An engine, not a camera: How financial models shape markets*. Cambridge: MIT Press.
- McNair, Malcolm P. 1931. The collection of cases. In *The case method of instruction: A related series of articles*, ed. Cecil Eaton Fraser, 142-58. New York: McGraw-Hill.
- McNair, Malcolm P., ed. 1954. *The case method at the Harvard Business School: Papers by present and past members of the faculty and staff*. New York: McGraw-Hill.

- Mennel, Robert M., and Christine L. Compston, eds. 1996. *Holmes and Frankfurter: Their correspondence, 1912-1934*. Hanover: University Press of New England.
- Mennicken, Andrea, and Michael Power. 2015. Accounting and the plasticity of valuation. In *Moments of valuation: Exploring sites of dissonance*, ed. Ariane Berthoin Antal, Michael Hutter and David Stark, 208-28. Oxford: Oxford University Press.
- Morgenstern, Oskar. 1950. *On the accuracy of economic observations*. Princeton: Princeton University Press.
- Muniesa, Fabian. 2012. A flank movement in the understanding of valuation. In *Measure and value*, ed. Lisa Adkins and Celia Lury, 24-38. Oxford: Wiley-Blackwell.
- Muniesa, Fabian. 2014. *The provoked economy: Economic reality and the performative turn*. Abingdon: Routledge.
- Orléan, André. 1986. Mimétisme et anticipations rationnelles: une perspective keynésienne. *Recherches Économiques de Louvain* 52 (1): 45-66.
- Orléan, André. 2014. *The empire of value: A new foundation for economics*. Cambridge: MIT Press.
- Ortiz, Horacio. 2014. The Limits of financial imagination: Free investors, efficient markets and crisis. *American Anthropologist* 116 (1): 38-50.
- Purcell, Edward A. Jr. 1973. *The crisis of democratic theory: Scientific naturalism and the problem of value*. Lexington: University Press of Kentucky.
- Richberg, Donald R. 1927. Value – by judicial fiat. *Harvard Law Review* 40 (4): 567-82.
- Richberg, Donald R. 1933. Economic illusions underlying law. *The University of Chicago Law Review* 1 (1): 96-101.
- Rorem, C. Rufus. 1929a. Business value. *The Journal of Business* 2 (3): 312-25.
- Rorem, C. Rufus. 1929b. Replacement cost in accounting valuation. *The Accounting Review* 4 (3): 167-74.
- Schelling, Thomas C. 1960. *The strategy of conflict*. Cambridge: Harvard University Press.
- Sloterdijk, Peter. 2013. *You must change your life*. Cambridge: Polity.
- Vermeule, Cornelius. 1971. Arthur Stone Dewing. *Proceedings of the Massachusetts Historical Society* 83: 165-7.
- Yonay, Yuval. 1998. *The struggle over the soul of economics: Institutional and neoclassical economists in America between the wars*. Princeton: Princeton University Press.